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ABSTRACT

**ELECTROSTATICALLY ACTUATED MICROSWITCHES WITH A LOW  
RESPONSE TIME AND POWER SWITCHING, AND ASSOCIATED  
PRODUCTION PROCESS**

The field of the invention is that of microsystems (also called MEMS standing for MicroElectroMechanical Systems) of the electrostatically actuated microswitch type that are used in electronics to carry out switching functions, especially in the microwave field for mobile telephony and radars.

The object of the invention is to improve the performance of the switch by reducing the response time of the device and by increasing the radiofrequency or microwave power supported, while still maintaining low switching voltages. This improved performance is obtained by using thick membranes and by placing a material of high relative permittivity between said membrane and the associated electrode.

The switch is obtained by a novel production process, the membrane being produced on an independent substrate and then joined to the base substrate of the switch. Examples of processes for producing devices according to the invention with the materials that can be used, the possible geometries and the various production steps are given.

**Figure 6**